DAIRY COW UNIFIED SCORE CARD

Breed characteristics should be considered in the application of this score card

MAJOR TRAIT DESCRIPTIONS

There are five major classification traits on which a classifier bases a cow's score. Each trait is broken down into body parts to be looked at and ranked.

1) Frame - 15%.....15 points

The skeletal parts of the cow, with the exception of feet and legs, are evaluated. Listed in priority order, the descriptions of the traits to be considered are as follows:

Rump - long and wide throughout with pin bones slightly lower than hip bones. Thurls need to be wide apart and centrally placed between hip bones and pin bones. The tailhead is set slightly above and neatly between pin bones, and the tail is free from coarseness. The vulva is neatly vertical. **Stature** - height, including length in the leg bones. A long bone pattern throughout the body structure is desirable. Height at the withers and hips should be relatively proportionate. **Front End** - adequate constitution with front legs straight, wide apart and squarely placed. Shoulder blades and elbows need to be firmly set against the chest wall. The crops should have adequate fullness. **Back** - straight and strong; the loin - broad, strong, and nearly level. **Breed Characteristics** - overall style and balance. Head should be feminine, clean-cut, slightly dished with broad muzzle, large open nostrils and a strong jaw is desirable Rump, Stature, and Front End receive primary consideration when evaluating Frame.

2) Dairy Character - 20%.....20 points

The physical evidence of milking ability is evaluated. Major consideration is given to general openness and angularity while maintaining strength, flatness of bone and freedom from coarseness. Consideration is given to stage of lactation. Listed in priority order, the descriptions of the traits to be considered are as follows:

Ribs - wide apart. Rib bones are wide, flat, deep, and slanted toward the rear. **Thighs** - lean, incurving to flat, and wide apart from the rear. **Withers** - sharp with the chine prominent. **Neck** - long, lean, and blending smoothly into shoulders. A clean-cut throat, dewlap, and brisket are desirable. **Skin** - thin, loose, and pliable.

3) Body Capacity - 10%.....10 points

The volumetric measurement of the capacity of the cow (length x depth x width) is evaluated with age taken into consideration. Listed in priority order the descriptions of the traits to be considered are as follows:

Barrel - long, deep, and wide. Depth and spring of rib increase toward the rear with a deep flank. **Chest** - deep and wide floor with well-sprung fore ribs blending into the shoulders.

The Barrel receives primary consideration when evaluating Body Capacity.

4) Feet and Legs - 15%.....15 points

Feet and rear legs are evaluated. Evidence of mobility is given major consideration. Listed in priority order, the descriptions of the traits to be considered are as follows:

Feet - steep angle and deep heel with short, well -rounded closed toes. **Rear Legs**: **Rear View** - straight, wide apart with feet squarely placed. **Side View** - a moderate

set (angle) to the hock. **Hocks** - cleanly molded, free from coarseness and puffiness with adequate flexibility. **Pasterns** - short and strong with some flexibility. Slightly more emphasis placed on Feet than on Rear Legs when evaluating this breakdown.

5) Udder - 40% .....40 points

The udder traits are the most heavily weighted. Major consideration is given to the traits that contribute to high milk yield and a long productive life. Listed in priority order, the descriptions of the traits to be considered are as follows:

Udder Depth - moderate depth relative to the hock with adequate capacity and clearance. Consideration is given to lactation number and age.

Teat Placement - squarely placed under each quarter, plumb and properly spaced from side and rear views.

Read Udder - wide and high, firmly attached with uniform width from top to bottom and slightly rounded to udder floor.

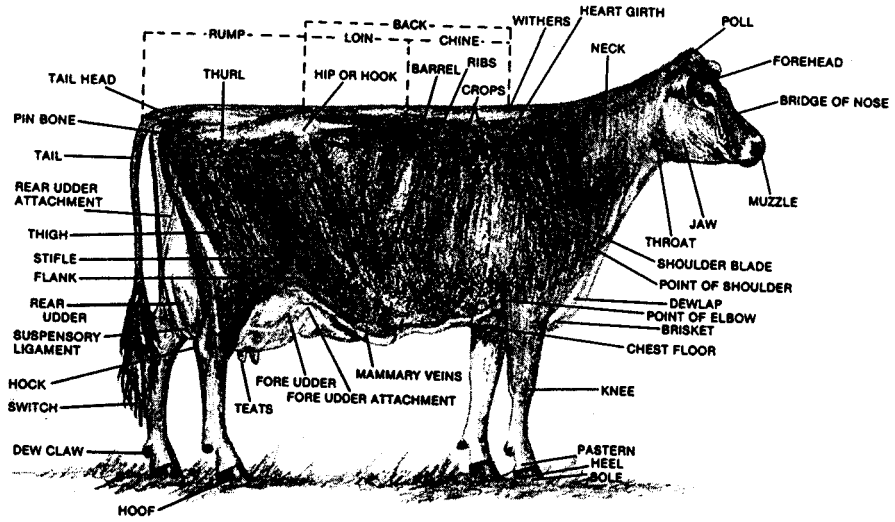
Udder Cleft - evidence of a strong suspensory ligament indicated by adequately defined halving.

Fore Udder - firmly attached with moderate length and ample capacity.

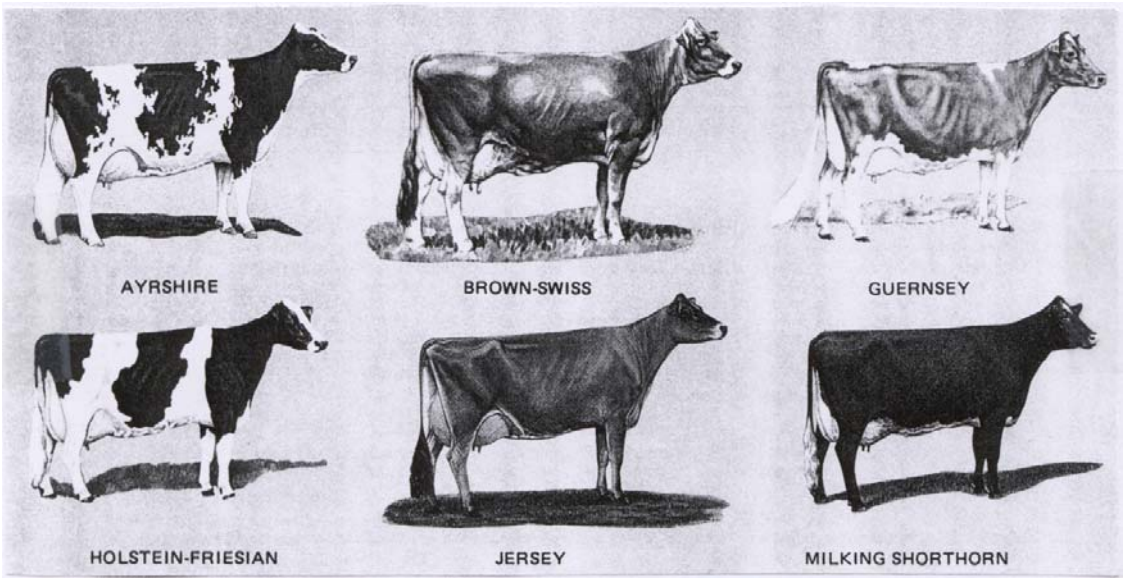
Teats - cylindrical shape and uniform size with medium length and diameter.

Udder Balance and Texture - should exhibit an udder floor that is level as viewed from the side. Quarters should be evenly balanced; soft, pliable and well collapsed after milking.

TOTAL 100 Points



PARTS OF A DAIRY COW



BREED CHARACTERISTICS

Except for differences in color, size and head character, all breeds are judged on the same standards as outlined in the United Score Card. If any animal is registered by one of the diary breed associations, no discrimination against color or color pattern is to be made

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AYRSHIRE

Strong and robust, showing constitution and vigor, symmetry, style and balance throughout, and characterized by strongly attached, evenly balanced, well-shaped udder.

HEAD-clean cut, proportionate to body; broad muzzle with large, open nostrils, strong jaw; large, bright eyes; forehead, broad and moderately dished; bridge of nose straight; ears medium size and alertly carried.

COLOR-light to deep cherry red, mahogany, brown, or a combination of any of these colors with white, or white alone, distinctive red and white markings preferred.

SIZE-a mature cow in milk should weight at least 1200 lbs.

HOLSTEIN

Rugged feminine qualities in an alert cow possessing Holstein size and vigor.

HEAD-clean cut, proportionate to body; broad muzzle with large, open nostrils; strong jaw; large, bright eyes; forehead, broad and moderately dished; bridge of nose straight; ears medium size and alertly carried.

COLOR-black and white or red and white markings clearly defined.

SIZE-a mature cow in milk should weigh a minimum of 1500 lbs.

MILKING SHORTHORN

Strong and vigorous, but not coarse.

HEAD-clean cut, proportionate to body; broad muzzle with large, open nostrils; strong jaw; large, bright eyes; forehead, broad and moderately dished; bridge of nose straight; ears, medium size and alertly carried.

COLOR-red or white or any combination. (No black markings allowed)

SIZE-a mature cow should weight 1400 lbs.

BROWN SWISS

Strong and vigorous, but not coarse. Size and ruggedness with quality desired. Extreme refinement undesirable.

HEAD-clean cut, proportionate to body; broad muzzle with large, open nostrils; strong jaw; large, bright eyes; forehead, broad and slightly dished; bridge of nose straight; ears medium size and alertly carried.

COLOR-solid brown varying from very light to dark. Muzzle is black encircled by a mealy colored ring, and the tongue, switch and hooves are black.

SIZE-a mature cow in milk should weigh 1500 lbs.

GUERNSEY

Size and strength, with quality and character desired.

HEAD-clean cut, proportionate to body; broad muzzle with large, open nostrils; Strong jaw; large, bright eyes; forehead, broad and slightly dished; bridge of nose straight; ears medium size and alertly carried.

COLOR-a shade of fawn with white markings throughout clearly defined. When other points are equal, clear (buff) muzzle will be favored over a smoky or black muzzle.

SIZE-a mature cow in milk should weigh at least 1150 lbs.

JERSEY

Sharpness with strength indicating productive efficiency.

HEAD-proportionate to stature showing refinement and well chiseled bone structure. Face slightly dished with dark eyes that are well set.

COLOR-some shade of fawn with or without white markings. Muzzle is black encircled by a light colored ring, and the tongue and switch may be either white or black.

SIZE-a mature cow in milk should weigh about 900 lbs

FACTORS TO BE EVALUATED

The degree of discrimination assigned to each defect is related to its function and heredity.
The evaluation of the defect shall be determined by the breeder, the classifier or the judge, based on the guide for discrimination and disqualifications given below.

HORNS
No discrimination for horns.

EYES
1. Blindness in one eye:*Slight discrimination.*
2. Cross or bulging eyes:*Slight discrimination.*
3. Evidence of blindness: *Slight to serious discrimination.*
4. Total blindness: *Disqualification.*

WRY FACE
Slight to serious discrimination.

CROPPED EARS
Slight discrimination.

PARROT JAW
Slight to serious discrimination.

SHOULDERS
Winged: *Slight to serious discrimination.*

TAIL SETTING
Wry tail or other abnormal tail settings: *Slight to serious discrimination.*

CAPPED HIP
No discrimination unless effects mobility.

LEGS AND FEET
1. Lameness-apparently permanent and inter-fering with normal function: *Disqualification.* Lameness-apparently temporary and not affecting normal function: *Slight discrimination.*
2. Evidence of crampy hind legs: *Serious discrimination.*
3. Evidence of fluid in hocks: *Slight discrimination.*
4. Weak pastern: *Slight to serious discrimination.*
5. Toe out: *Slight discrimination.*

UDDER
1. Lack of defined having: *Slight to serious discrimination.*
2. Udder definitely broken away in attachment: *Serious discrimination.*
3. A weak udder attachment: *Slight to serious discrimination.*
4. Blind quarter: *Disqualification.*
5. One or more light quarters, hard spots in udder, obstruction in teat (spider): *Slight to serious discrimination.*
6. Side leak: *Slight discrimination.*
7. Abnormal milk (bloody, clotted, watery): *Possible discrimination.*

LACK OF SIZE
Slight to serious discrimination.

EVIDENCE OF SHARP PRACTICE
(Refer to PDCA Code of Ethics)
1. Animals showing signs of having been tampered with to conceal faults in conformation and to misrepresent the animal's soundness: *Disqualification.*
2. Uncalved heifers showing evidence of having been milked: *Slight to serious discrimination.*

TEMPORARY OR MINOR INJURIES
Blemishes or injuries of a temporary character not affecting animal's usefulness: *Slight to serious discrimination.*

OVERCONDITIONED
Slight to serious discrimination.

FREEMARTIN HEIFERS
Disqualification.

FFA DAIRY CATTLE CONTEST
SIRE SELECTION - SAMPLE PROBLEM # 1

SITUATION:

Semen is available from each of these four bulls at similar prices. All bulls rank in the top 15% of the breed for Production-Type Index. Rank the four bulls as they best meet the following objectives in the mating of this cow.

This New England herd has two-hundred purebred Jersey cows. The milk is processed through their own bottling plant and sold through various retail routes. Whole milk is standardized at 3.8% and excess milk fat is sold as heavy cream to an ice cream plant. Fat test is not of high concern due to its low value. Cows are housed in a free stall barn and very functionally correct cattle are most desirable. Emphasis is placed on correct feet and legs and well attached udders with strong support. The lactation average is 18,500 lbs. milk, 780 lbs. fat and 690 lbs. protein.

COW TO BE MATED		BULLS TO CONSIDER			
CURRENT RECORD	TRAITS	1	2	3	4
(1YR 10MO-ME)					
	REL	99	70	89	94
17,600 M	PTA-MILK	2277	1756	1883	2210
4.5	PTA-FAT%	-.35	.03	.05	-.21
792 F	PTA-FAT	54	88	95	72
3.7	PTA-PRO%	-.15	-.02	-.07	.04
651 P	PTA-P	62	62	59	88
	PTA-MFP$	239	238	244	288
	NET MERIT	232	256	251	329
	PTI	372	365	356	495
LINEAR SCORES					
32	STATURE	2.1	2.0	2.4	1.1
30	DAIRY FORM	5.8	0.3	4.4	5.5
24	STRENGTH	-.1	1.2	1.8	-.4
22	THURL WIDTH	.4	1.2	1.9	-.3
15	PELVIC ANGLE	L1.1	L0.5	L2.3	L0.3
35	REAR LEGS	P1.1	P0.6	P1.2	P0.8
18	FOOT ANGLE	S0.8	0.0	S0.8	S2.0
25	FORE UDDER	-.4	1.0	-.4	-.4
22	R UDDER HEIGHT	3.9	.2	1.6	3.9
23	R UDDER WIDTH	3.8	0.1	2.6	3.3
22	SUSP LIGAMENT	1.1	-.1	1.3	1.3
18	UDDER DEPTH	S0.2	S1.5	D1.2	S0.2
15	FRONT TEAT	C0.2	W0.2	C1.3	C2.0
18	PLACEMENT	L0.6	L0.5	L2.2	L1.5
	TEAT LENGTH				

PELVIC ANGLE (H-HIGH, L-LOW) REAR LEGS (S-SICKLE, P-POSTY)
FOOT ANGLE (S-STEEP, L-LOW) UDDER DEPTH (D-DEEP, S-SHALLOW)
FRONT TEAT PLACEMENT (W-WIDE, C-CLOSE) TEAT LENGTH (L-LONG, S-SHORT)

FFA DAIRY CATTLE CONTEST
SIRE SELECTION - SAMPLE PROBLEM # 2

SITUATION:
Semen is available from each of these four bulls at similar prices. All bulls rank in the top 15% of the breed for Production-Type Index. Rank the four bulls as they best meet the following objectives in the mating of this cow.

This Midwestern dairyman has a one hundred cow herd of Holsteins. His milk is marketed under a component pricing system. Thus he wants to increase the total pounds of protein that he ships. The cows are housed in a free stall setup and he wants his cattle to be very functional in their type. He does market an animal occasionally for show purposes so he is concerned about more than just function. Cows must have correct feet and legs and well attached udders. While fat test no longer carries a high premium, he believes that cattle with pedigrees with solid component tests command more money. The RHA is 23,000 lbs. milk, 850 lbs. fat and 760 lbs. protein.

COW TO BE MATED		BULLS TO CONSIDER			
CURRENT RECORD	TRAITS	1	2	3	4
(1YR 11MO-ME)					
	REL	99	59	80	74
24,500	PTA-MILK	2330	2506	1800	3062
3.7	PTA-FAT%	-.05	-.06	.26	-.05
906	PTA-FAT	73	78	119	98
3.2	PTA-PRO%	.04	.07	.12	-.03
784	PTA-P	79	93	79	87
	PTA-MFP$	281	314	287	345
	NET MERIT	270	303	361	331
	TPI	1341	1437	1267	1245
LINEAR SCORES					
30	STATURE	.60	1.67	1.54	1.36
38	DAIRY FORM	-.10	2.29	3.26	1.12
27	STRENGTH	-.10	-.44	1.90	-.04
32	THURL WIDTH	-1.02	-.29	1.35	-.99
28	PELVIC ANGLE	-2.48	.26	-2.99	-.41
29	REAR LEGS	-1.53	-.12	-.20	-.92
30	FOOT ANGLE	.68	.34	.68	1.61
18	FORE UDDER	2.06	2.35	-.14	.07
22	R UDDER HEIGHT	5.00	1.70	2.42	1.14
18	R UDDER WIDTH	4.34	1.35	3.51	.27
40	SUSP LIGAMENT	1.68	2.20	.63	.79
23	UDDER DEPTH	2.76	2.66	-1.63	1.28
30	FRONT TEAT	.58	.73	.57	-1.82
20	PLACEMENT	.47	-.05	-.56	1.25
	TEAT LENGTH				

FFA DAIRY CATTLE CONTEST

Official reasons for placing <u>sire selection</u> classes:

Problem # 1: In the scenario, it is determined that the main concern of the breeder is production, both milk and protein, from functionally sound cattle.

The cow to be mated is slightly below the herd's lactation average for both milk and protein yield. According to her linear information she is high in the pins and has considerable set to the hock with a low foot angle. She is also somewhat lacking in rear udder height and width and too deep in the udder with somewhat widely set, short teats.

Considering the available bulls, #4 has the highest level for protein yield and PTA-MFP$. The other bulls are very similar to each other for MFP$ and protein yield. # 3 is slightly ahead of the other two bulls for MFP$ which gives one an idea of the economically weighted value of the yields of milk, fat and protein.

Bull # 4 has type components which complement the weaknesses of the cow. The foot angle is steep, the rear udder components are very significantly high and the teat pattern is corrective for this cow. Though not significantly so, the rear leg pattern is in the correct direction as is udder depth.

In comparing the other 3 bulls, # 1 and # 3 are corrective for the rump angle, rear legs and rear udder components. # 3 is corrective for the teat placement but has daughters with deeper than average udders. However, the correction of this trait by bull # 1 is only a tendency as the values are near zero for both udder depth and teat placement. This would indicate "no change" or "breed average". Bull # 2 is not as corrective for the rear udder traits, pelvic angle or rear legs. His daughters also have a tendency to be wide in teat placement.

Considering these several points, the best placing for the bulls is 4-3-1-2. Due to the different traits for each bull, the cuts are 5-2-3.

Problem # 2: In the scenario, it is indicated that the dairyman is mostly concerned with protein yield due to his milk market. His concern for functionally sound type is reinforced with the additional income potential from sale of show stock.

The cow to be mated is above herd average for all yield traits. According to her linear traits, the cow is somewhat loose in the fore udder attachment, low and narrow in the rear attachment but structurally sound and having a strong median support.

The differences in protein yields of these four bulls (79 to 93#) are not significant, particularly given the lower reliability of three of them. Bull # 2 has the highest protein yield and complements the weak points of the linear scores very well. However, he is a relatively “young” sire with a less reliable proof. Sire # 1 has a highly reliable proof, is only slightly lower in protein yield and meets the deficiencies in the linear scores without great sacrifice in the other linear traits. He is a slightly better choice for the mating.

Bull # 3 and # 4 are also younger bulls but of higher reliability than # 2. While # 3 has rear udder traits that will be corrective, the fore udder PTA is not helpful. Sire # 4 does have the second highest protein level but the udder components (except for RU height) are not as well suited for this mating as the other bulls.